

## Requirements Capture Spring 2013

### Intro

The idea of this project is to create a cheaper alternative to current large wind turbines. The plan is that with smaller moving parts we should be able to create a turbine that will be smaller yet have an equal if not higher power output while saving greatly on initial startup costs.

### Requirements

1. Have an equal or higher power output compared to larger turbines.
2. Have a much lower startup cost.
3. Be able to operate at lower wind speeds than conventional turbines.
4. Be able to operate at higher wind speeds without breaking.
5. Have outside cone diameter of 1.6 meters.
6. Use a smaller turbine on the inside; size determined to maximize efficiency and cost savings.
7. Required that the cone can withstand high wind speeds without damage according to standards.
8. Increase maximum output of the current generator via creating our own controller.
9. Integrate a solar cell to increase input.
10. Produce test fan controller (non-PCB, for testing only)
11. Produce sufficient output to maintain battery charge with continuous load.
12. Take measurements and compare values in LAB VIEW.

This document describes all project requirements set forth by the advisor and/or client. Grading will be performed at the end of the semester according to the level at which these requirements are met.”

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